

ARTICLE

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Consumer spending in World War II: the forgotten consumer expenditure surveys

To help mark the Monthly Labor Review's 100th year, the editors invited several producers and users of BLS data to take a look back at the last 100 years. This article looks at two published but often neglected wartime consumer expenditure surveys—one that covered expenditures in 1941 and the first 3 months of 1942 and another that covered expenditures only of urban households in 1944—to place them into the historical context of changes in consumer spending patterns from the 1930s through 2013.

Shortly after the December 1941 entry of the United States into the Second World War, the Bureau of Labor Statistics (BLS) and the Department of Agriculture's Bureau of Human Nutrition and Home Economics¹ conducted a survey to provide estimates of expenditures and savings by income class for the entire nation. The results of this survey, "Family spending and saving in wartime"—published with initial data in the September and October 1942 issues of the *Monthly Labor Review* and published with final data as BLS bulletin 822 in 1945—covered two time periods: all of 1941 and then the first 3 months of 1942. A second report, "Income and spending and saving of city families in wartime," bulletin 724, *Monthly Labor Review*, September 1942, highlighted the differences in U.S. spending for urban families before and after the attack on Pearl Harbor and the U.S. entry into the war. Then in 1944 the survey was repeated for urban households to see how spending changed, and the results were published in "Expenditures and savings of city families in 1944," serial no. R. 1818, *Monthly Labor Review*, January 1946. However, after being discussed in articles in the 1942 and 1946 *Monthly Labor Review* (MLR), the consumer expenditure surveys collected during the Second World War faded from history.

The historic information has long been overlooked in Consumer Expenditure Survey (CE) spending summaries—the World War II studies were not mentioned in the BLS *Handbook of Methods* prior to the pending 2015 update and almost no mention in the several historical articles by BLS describing survey results over the decades.² The expenditure data and income information contained in their tables are not available in any BLS online document. After 70 years, it is time to revisit the findings and finally place them within the historical context of changes in urban consumer spending since the 1930s.

Purpose and methodology of the wartime spending surveys

At the start of America's entry into the war, the U.S. government needed current information on consumers' purchases and the shares going to major expenditures. The previous survey results were from 1935 to 1936. As described in the bulletin 822 foreword to the 1941–42 surveys, "The need for facts on which to base decisions for the civilian economy during wartime became especially urgent after the entrance of the United States into the war in December 1941. Policy decisions had to be made regarding price and wage controls, rationing, food production and distribution, taxation and other forms of war financing."³

1941–42 U.S. consumer spending

The first of the wartime surveys gathered data from a representative sample of the continental United States—48 states existed at that time—and was designed to measure current consumption details for all

population size areas. The sample consisted of 1,300 families and single people within cities, 1,000 households in rural nonfarm areas, and an additional 760 households on farms; all segments of the U.S. population other than residents of military camps and inmates were included. In scope, the representation of all noninstitutionalized urban and rural population is very similar to today's Consumer Expenditure Survey.

Data were collected by personal visit using a very detailed paper collection form with questions asking the respondents to recall their income and spending for all of 1941 as well as their quarterly spending amounts for food, board, and alcohol. The same basic form was used in 1942 asking for information for just one 3-month quarter.

Both spending and income were collected and summed on a worksheet on the form. Expenditures and income had to balance within 5.5 percent for city and nonfarm households and 9.5 percent for farm families to be considered acceptable.⁴ A supplemental schedule was used to learn about the food that was bought and consumed the week prior to the interview. In addition to being asked about mortgage principal and other housing costs, families who owned their own home were asked to estimate monthly rental value. This estimated rent was treated as nonmonetary income and used in the balancing equation.⁵

Although a dual survey approach consisting of an interview and a diary has been used since 1972, during World War II a diary collection instrument, described as an "account-book method of collection," was purposely not used because of the prohibitive cost of frequent visits by the survey collectors and the editorial time required to summarize entries. Also, there was concern about sample bias, as ". . . the type of family willing to keep accounts is likely to be one with superior managerial ability and unusual time and patience. Such families do not form a cross section of consumers, and a sample composed exclusively of them would be seriously biased."⁶

Sample weighting was used, and high-income families who participated were reweighted to deal with underrepresentation of both those with income between \$5,000 and \$10,000 (about \$80,000 to \$170,000 today) and those with an income over \$10,000.

Bulletin 822 also compared the accuracy of the consumer expenditure survey data with other federal data sources. Income and age data were compared with data from the 1940 census. Income data were compared with the Department of Commerce Income Payment Series. The CE data results showed "an overall discrepancy of about 10 billion dollars, or about 11 percent. The greatest absolute difference occurs in the very large figure for wages and salaries, though percentage-wise, the greatest differences are in dividends and interest and in nonagricultural entrepreneurial income."⁷ Aggregate Social Security income figures were compared with Social Security Administration disbursements, interest and dividends were compared with Internal Revenue data, and savings data were compared with Security and Exchange Commission data.

Results

The “Family spending and saving in wartime” report presented the data separately for the two time periods: annual spending for 1941 and spending for the first quarter of 1942. The published results were not merged. Table 1 shows the dollars and the shares of money expenses for the two time periods. In table 1 the results from the first 3 months of 1942 were multiplied by 4 to compare annualized dollar amounts.

Table 1. Consumption for all U.S. households, excluding gift purchases and in-kind value received for food, housing, and clothing, 1941 and 1942

Category	1941		1942			1941–1942	
	Consumer expenditures ⁽¹⁾	Share of total consumption (percent)	Consumer expenditures (first 3 months) ⁽²⁾	Annualized consumer expenditures	Share of total consumption (percent)	Change in shares (percent)	Change in dollars
Total money income	\$1,974	NA	\$517	\$2,068	NA	NA	\$94
Consumption (money expense)	1,666	100.0	410	1,640	100.0	NA	-26
Food, including alcohol	516	31.0	136	544	33.2	7.1	28
Total housing	468	28.1	116	464	28.3	0.7	-4
Housing, fuel, light, and refrigeration	290	17.4	76	304	18.5	6.5	14
Household operations	85	5.1	21	84	5.1	0.4	-1
Furnishings and equipment	93	5.6	19	76	4.6	-17.0	-17
Clothing	205	12.3	50	200	12.2	-0.9	-5
Total transportation	205	12.3	38	152	9.3	-24.7	-53
Automobile purchase, fuel, repair, insurance, and fees	171	10.3	30	120	7.3	-28.7	-51
Other transportation	34	2.0	8	32	2.0	-4.4	-2
Personal care	36	2.2	9	36	2.2	1.6	0
Medical care	84	5.0	23	92	5.6	11.3	8
Recreation	69	4.1	16	64	3.9	-5.8	-5
Tobacco	35	2.1	9	36	2.2	4.5	1
Reading	16	1.0	4	16	1.0	1.6	0
Education	15	0.9	4	16	1.0	8.4	1

Category	1941		1942			1941–1942	
	Consumer expenditures ⁽¹⁾	Share of total consumption (percent)	Consumer expenditures (first 3 months) ⁽²⁾	Annualized consumer expenditures	Share of total consumption (percent)	Change in shares (percent)	Change in dollars
Other	17	1.0	5	20	1.2	19.5	3

Notes:

⁽¹⁾ Income from "Family spending and saving in wartime," bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 3, page 71. Dollar amounts and shares were obtained or calculated from table 5, top of page 75.

⁽²⁾ Income from "Family spending and saving in wartime," bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 3, page 72. Dollar amounts and shares were obtained or calculated from table 5, bottom of page 75.

Source: U.S. Bureau of Labor Statistics.

The results in table 1 show the start of the United States switching to a domestic wartime economy at the beginning of 1942. Incomes were beginning to rise. Food purchases, the largest share of any major category, had increased and accounted for one-third of total consumption spending. Housing costs had increased slightly, while the subcomponent for household furnishings had dropped. Spending on household furnishings and on automobiles and gasoline and car parts fell sharply (down 17 percent and 29 percent, respectively), and medical care expenditures increased.

During the first quarter of 1942, U.S. production of vehicles for domestic use was halted and the industry changed over to producing vehicles and supplies for the military.⁸ The federal Office of Price Administration was formed as an independent agency, under the January 30, 1942, Emergency Price Control Act, with power to implement price ceilings and ration certain items and foods.⁹ Ration stamps for gasoline and then food were introduced in 1942.¹⁰

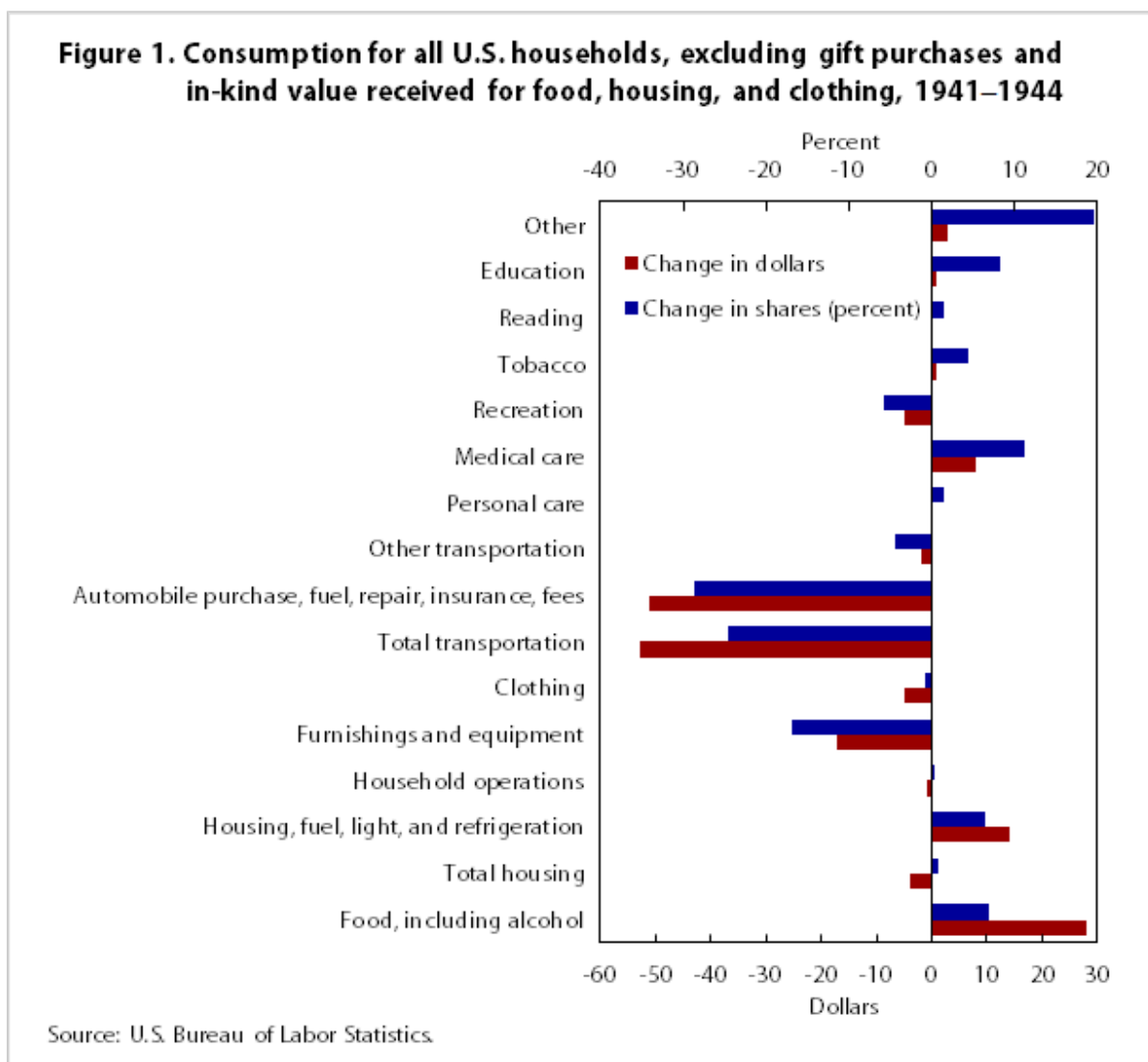


Figure 1 illustrates the changeover documented in table 1; shares are in blue and dollars are in red. The steep declines in household furnishings and equipment and transportation stand out.

Additional information about the 1941–42 survey

The survey collected spending information for a large number of item categories that reveal the typical purchases during that decade. In addition to asking if the households owned a car, BLS collected the number of car tire inner tubes bought in the reference period and the number of bicycles owned by the family.

The itemized list of expenditure categories also included purchases of pianos, radios, radio-phonographs, and “electric, other mechanical, and ice” refrigerators. Four types of washing machines were included—“electric, Kerosene, gasoline, hand”—as were “washtub, board, wringer, boiler.” Spending on “ironing machines” was collected, as well as costs for various kinds of irons: “electric, Kerosene, gasoline, flat iron.” Clothing categories included hats “felt, straw [which combined both ‘street’ and ‘work’ straw hats], fabric,” cotton and wool bathing suits, bloomers, union suits, and hosiery divided into “rayon, nylon, cotton including lisle, [and] wool.”¹¹

Data for these items and several hundred other subcategories were also published in bulletin 822. This level of detail is similar to the current prepublication categories available upon request from today's CE office. For copies of the current prepublication tables, please contact CEXINFO@BLS.gov.

In addition, the urban subset of the families interviewed in 1941 and 1942 was analyzed in bulletin 724, "Income and spending and saving of city families in wartime," which was first printed in the September 1942 *MLR*. That report summarized expenditure trends after the United States entered the war:

With new cars and tires rationed, expenditures of the average city consumer for buying and running automobiles were much lower in 1942 than in 1941. Outlays for household furnishings and durable equipment such as stoves and refrigerators were also lower. The only expenditures of the average consumer that showed notable increases in average amount between 1941 and 1942 were for food, fuel, and medical care. Families usually spend more for medical care and fuel in winter time. Food prices, however, had advanced 11 percent between 1941 and the first quarter of 1942, while expenditures for food went up only 5 percent. This means that city consumers were buying less food or the cheaper foods in the first 3 months after the declaration of war.¹²

Urban spending in 1944

The other forgotten expenditure survey done during World War II was conducted in 1944 and was limited to city residents. The results of this urban survey, "Expenditures and savings of city families in 1944," were published in the January 1946 *Monthly Labor Review*. The survey of 1,700 consumers was conducted in 102 urban communities and represented "all regions of the United States and cities in every size class from those with a population of 2,500 persons to the largest city in the country."¹³ The article noted several economic changes between 1941 and 1944: more members of each family were working, so incomes were generally higher, but "high wartime prices and costs meant a fairly simple pattern of living, without extravagances, for most families. . . ."¹⁴ In addition, spending on food increased, while rent-control programs kept housing costs the same for many families. But "the wartime disappearance of new automobiles and durable household equipment was reflected in the much smaller share of income devoted to these goods in 1944 than in 1941. On the other hand, expenses for medical care took a larger portion of the total, particularly among low-income families, probably because of higher medical costs and greater need for care as a result of longer hours of work."¹⁵

Wartime trends from 1941 to 1944

Compared with incomes in 1941, 1944 urban incomes continued to rise as more workers were needed. According to the January 1946 *MLR* article, the average number of earners had climbed. State-level child labor laws were relaxed, permitting workers under 17 to work in factories. In 1944 food and gasoline ration coupons were in full use, and new major appliances and vehicles were unavailable because U.S. industry focused solely on manufacturing military equipment and supplies. The share spent on household furnishings and equipment was down by 35 percent from the end of 1941, and the share for automobile purchase, fuel, repair, insurance, and fees was down by nearly 60 percent. See table 2.

Table 2. Consumption of urban households, excluding gift purchases and in-kind value received for food, housing, and clothing, 1941 and 1944

Category	1941		1944		Percent change, 1941–44	
	Dollars	Shares (percent)	Dollars	Shares (percent)	Dollars	Shares (percent)
Total after-tax income	\$2,372	NA	\$3,115	NA	NA	NA
Consumption	2,060	100.0	2,406	100.0	NA	NA
Food, including alcohol	637	30.9	863	35.9	\$35.55	16.1
Total housing including operations and furnishings	598	29.0	628	26.1	5.03	-10.1
Housing, fuel, light, and refrigeration	385	18.7	421	17.5	9.42	-6.3
Household operations	109	5.3	128	5.3	17.64	0.7
Furnishings and equipment	104	5.0	79	3.3	-24.43	-35.3
Clothing	247	12.0	385	16.0	56.02	33.6
Total transportation	247	12.0	152	6.3	-38.50	-47.3
Automobile purchase, fuel, repair, insurance, and fees	198	9.6	93	3.9	-52.79	-59.6
Public and other transportation	49	2.4	58	2.4	19.26	2.1
Personal care	45	2.2	58	2.4	27.86	9.5
Medical care	96	4.7	133	5.5	38.31	18.4
Recreation, entertainment, reading, and education	131	6.4	108	4.5	-17.35	-29.2
Recreation and entertainment	91	4.4	67	2.8	-26.01	-36.6
Tobacco	43	2.1	47	2.0	10.38	-5.5
Reading	21	1.0	26	1.1	25.07	7.1
Education	19	0.9	15	0.6	-22.76	-33.9
Other miscellaneous	16	0.8	31	1.3	93.43	65.6

Note: See appendix for notes about table data sources.

Source: U.S. Bureau of Labor Statistics.

Changes in urban consumer spending, 1930s to 2013

The wartime survey results can now be used to look at how U.S. urban spending has changed from the 1930s to the present decade. Table 3 shows spending in nominal dollars for the major categories, and table 4 shows shares. It is important to note that the results are for current consumption, not for total expenditures. The earlier surveys defined consumption as spending minus cash contributions, gifts, and personal insurance and pensions. In the earlier years, contributions to pension plans were very small, but in 2013 they were a substantial portion of expenditures. Subtracting them from the 2013 data changed the relative shares for all the remaining expenditure categories. Because of this, the adjusted shares in table 4 for 2013 are different than the published shares in the Consumer Expenditure standard tables online.

Table 3. Consumption for urban households, excluding gift purchases, pension contributions, and in-kind value received for food, housing, and clothing, selected years

Category	1935–36 wage and clerical workers	1941	1944	1950 all families	2013
Total after-tax income	\$1,518	\$2,372	\$3,115	\$3,910	\$57,505
Consumption	1,463	2,060	2,406	3,808	43,399
Food, including alcohol	508	637	863	1,195	7,052
Total housing	485	598	628	1,035	17,444
Housing, fuel, light, and refrigeration	367	385	421	596	14,685
Fuel, light and refrigeration	108	NA	NA	158	1,930
Household operations	58	109	128	178	1,183
Furnishings and equipment	60	104	79	261	1,575
Kitchen, cleaning and laundry equipment	NA	36	NA	89	246
Clothing	160	247	385	437	1,437
Total transportation	125	247	152	510	8,857
Automobile purchase, fuel, repair, insurance, fees	87	198	93	443	8,319
Automobile purchase and leasing	NA	91	NA	250	3,444
Public and other transportation	38	49	58	67	538
Personal care	30	45	58	85	609
Medical care	59	96	133	197	3,565
Recreation and entertainment	38	91	67	168	2,417
Tobacco	29	43	47	68	313
Reading	15	21	26	35	99
Education	7	19	15	23	904
Other miscellaneous, excluding personal insurance and pensions	7	16	31	55	653

Note: See appendix for notes about table data sources.

Source: U.S. Bureau of Labor Statistics.

Table 4. Percent distribution of consumption for urban households using after-tax income, excluding gift purchases, pension contributions, and in-kind value received for food, housing, and clothing, selected years

Category	1935–36 wage and clerical workers	1941	1944	1950 all families	2013
Consumption	100.0	100.0	100.0	100.0	100.0
Food, including alcohol	34.7	30.9	35.9	31.4	16.2
Total housing	33.2	29.0	26.1	27.2	40.2
Housing, fuel, light, and refrigeration	25.1	18.7	17.5	15.7	33.8
Fuel, light and refrigeration	7.4	NA	NA	4.1	4.4
Household operations	4.0	5.3	5.3	4.7	2.7
Furnishings and equipment	4.1	5.0	3.3	6.9	3.6
Kitchen, cleaning and laundry equipment	NA	1.7	NA	2.3	0.6
Clothing	10.9	12.0	16.0	11.5	3.3
Total transportation	8.5	12.0	6.3	13.4	20.4
Automobile purchase, fuel, repair, insurance, and fees	5.9	9.6	3.9	11.6	19.2
Automobile purchase and leasing	NA	4.4	NA	6.6	7.9
Public and other transportation	2.6	2.4	2.4	1.8	1.2
Personal care	2.1	2.2	2.4	2.2	1.4
Medical care	4.0	4.7	5.5	5.2	8.2
Recreation and entertainment	2.6	4.4	2.8	4.4	5.6
Tobacco	2.0	2.1	2.0	1.8	0.7
Reading	1.0	1.0	1.1	0.9	0.2
Education	0.5	0.9	0.6	0.6	2.1
Other miscellaneous, excluding personal insurance and pensions	0.5	0.8	1.3	1.4	1.5

Note: See appendix for notes about table data sources.

Source: U.S. Bureau of Labor Statistics.

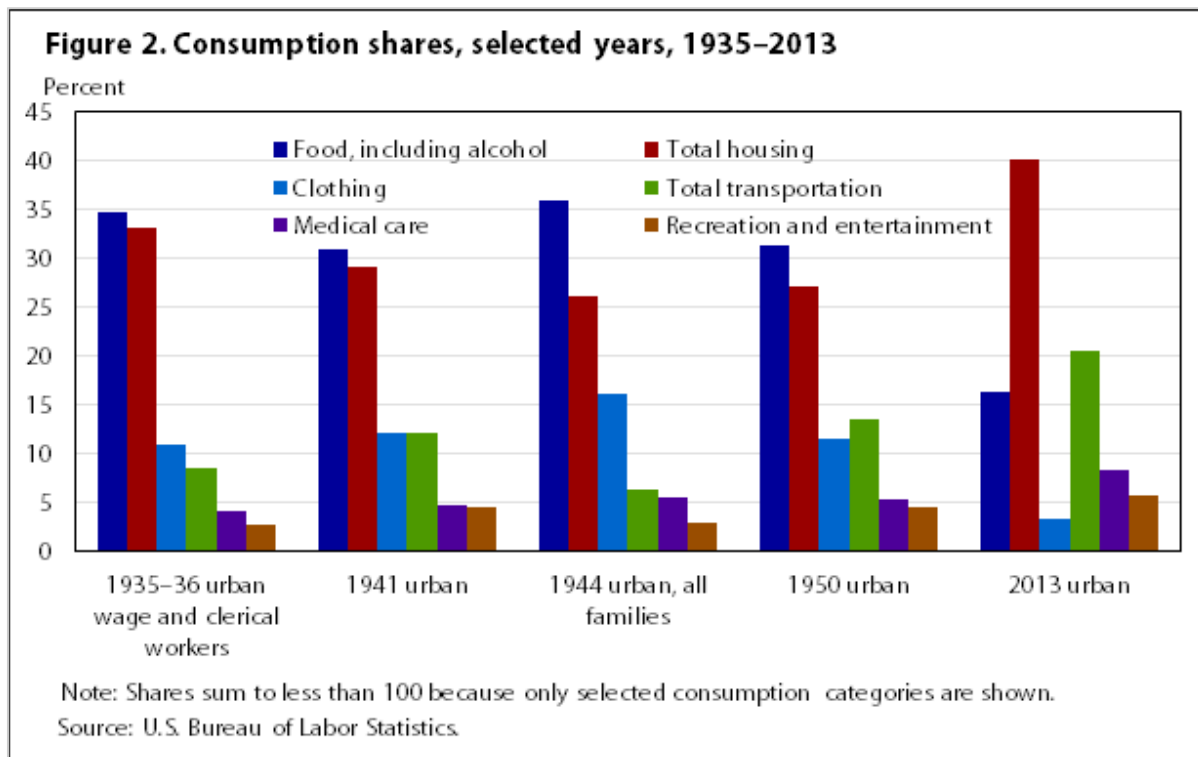
The nominal dollars spent over the years is interesting from a historical perspective, but relative shares information is useful in seeing how households have divided their budget over the years.

Trends before, during, and after World War II

The major trend over the past 80 years has been a reduction in the share of spending on food and clothing. Food had been the largest budget item, consuming 35 percent of the average urban household budget in 1935–36, dropping slightly in 1941 to 31 percent, moving back up to 36 percent in 1944, drifting down to 31 percent in the 1950s, and then continuing a long decline in relative share, dropping in half to 16 percent in 2013.

Clothing was 11 percent of total consumption in the 1930s, climbing during the war to 16 percent in 1944, dropping to 12 percent in the 1950s, and showing the same long-term decline in relative share as food. It is now just over 3 percent of total consumption.

At the same time, the share for total housing started out at 33 percent in 1935–36, just below the share for food. The share stayed below that of food throughout the war and into the 1950s before becoming the largest consumption cost. In 2013 total housing was 40 percent of consumption spending.



Transportation and healthcare spending have both doubled their share of consumption over the years, and by 2013 both exceeded the share spent on food. Total transportation spending was 8.5 percent of consumption in the 1930s, climbing to 12 percent at the start of the war before dropping because of rationing and the unavailability of new vehicles. Transportation spending then increased to 13 percent in the 1950s and continued to climb as spending for vehicle purchases and other transportation costs rose to 20 percent. Out-of-pocket medical care was just 4 percent of total consumption in the 1930s but began increasing during the war, climbing to around 4.7-to-5.5 percent; it leveled off at 5.2 percent in the 1950s and then increased regularly, reaching just over 8 percent in 2013. Figure 2 illustrates these changes in shares over time, with food and clothing showing parallel declines, in contrast to the increases for the selected other major components of current consumption. Housing exceeds relative combined spending on food at home and food away from home in the later years, and transportation costs also now exceed the share of the U.S. household budget going for food.

Final observations

The question remains: Why have the World War II expenditure surveys been forgotten? Two explanations suggest themselves.

The first possibility is that the small sample size of the 1941–42 and 1944 studies made them less accurate and less important. Compared with the earlier survey in the 1930s and the next survey in the 1950s, this was a smaller effort. However, the issue of small sample size and accuracy was anticipated in the original *MLR* article. The authors of the article preemptively noted:

The size of the sample is smaller than in any previous survey on which national estimates have been based. The smallness of the sample yields positive advantages in speed of completion, cost, quality of personnel, avoidance of bias, and simplicity of tabulation. Reliability for the purpose of national estimates of a sample of this size, when selected subject to the careful controls described, is confirmed by theoretical tests and also by comparison of the results yielded by the actual sample drawn with Census data and other data from independent sources. The internal consistency of the sample data themselves is another indication of the adequacy of the sample size for the purpose of national estimates. The general patterns of spending are entirely consistent with the results obtained in 1935–36 from a much more extensive but less inclusive sample. The points at which divergencies are noted, as in expenditures for automobiles, other durable goods, and clothing, and in savings, are the very points at which known changes in general conditions account for current behavior.¹⁶

The second explanation may be that expenditure results during World War II were not used to adjust the Consumer Price Index weights, so their results were not used after their original publication. The results were so different from peacetime spending that perhaps they should not be compared with the other surveys. Rationing and price controls and the limits on production showed a very different picture of consumer behavior during the war. The 1941–42 and 1944 surveys had a very specific purpose—to understand what was occurring in the United States during wartime.

In fact, subsequent expenditure survey reports had few references to the wartime surveys. In the 1959 multivolume set examining the 1950 CE results, the World War II surveys were almost completely excluded from the discussion, with the focus being on changes in expenditures from the 1935–36 survey results to the 1950s. The 1941–42 and 1944 surveys were briefly described in the 1959 documentation, but no results were included.¹⁷

However, while the overall data from World War II were not used, the results for apparel spending during the war were included in the 1959 documentation. A paper presented at the 1959 conference and included in the published results discusses “the persistent decline in the proportion of consumer disposable income” that has been spent on clothing. It noted that “Actually this downward movement is not merely a post-World War II phenomenon because the corresponding percentages for the period 1929 through 1941 indicate a rather steady decline from 13.5 percent to 11.3 percent in current dollars and from 16.4 percent to 12.8 percent in 1947–1949 constant dollars.”¹⁸

An online search for citations of “Family spending and saving in wartime,” bulletin no. 822, turned up a few references in the 1950s but nothing after then.

By the 1960s, the memory of the World War II expenditure surveys was slipping away. Since the rural population was not surveyed in the 1950 survey, the 1960 publication noted that the last all-U.S. survey was from 1941. The combined urban and rural study from 1941 was mentioned in the introduction to “Consumer expenditure and income, total United States, urban and rural, 1960–61,” published in February 1965, along with a brief summary of the results for total income and total expenditures, and a mention of the higher spending in urban areas and lower income in the rural. There was no comparison table containing details of the 1941 results and no mention of the 1942 portion of the survey.¹⁹ The 1960s’ documentation included a footnote citing the 1941–42 publication, so someone hunting for the wartime results could still locate them.

While the 1941 all-U.S. survey during the war was mentioned in the 1960s’ documentation, the World War II urban results from 1941, 1942 and the now-forgotten 1944 urban study were not mentioned. The 1964 introduction compared income and expenditures from the 1950 results with the 1960–61 all-U.S. results.

By the time the results of the 1972–73 expenditure survey were tabulated and published, the existence of the 1941–42 survey was simply mentioned in the historical background section. No results were given and no footnote provided to guide researchers to the original sources. As in 1960, there was no mention of the 1944 study. The 1972–73 bulletin 1992 background section noted, “During 1941–42 the BLS cooperated with the Department of Agriculture in conducting a nationwide survey of the civilian noninstitutional population. The purpose of the survey was to provide a body of data on which to base governmental decisions affecting the civilian economy during the Second World War. This was the first nationwide survey that permitted the estimation of national expenditures and savings classified by income class.”²⁰

Conclusion

The Bureau of Labor Statistics has been a careful measurer of consumer spending beginning in 1888. Part of this survey work included two consumption studies during World War II. These long-forgotten studies traced the U.S. domestic economy pivoting to a wartime economy and changes in personal spending patterns during the war. By placing the wartime studies in the context of overall trends in the 20th and 21st centuries, this article demonstrates that the studies done in 1941–1942 and 1944 showed how household spending was part of longer-term trends in which spending shifted from food and clothing to housing and transportation.

Appendix

Notes to table 2

1941 urban data are from “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 5, “Major categories of consumption,” page 75, separate column for type of community = urban.

1941 urban income data are after taxes. See “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 16, “Summary of average money and nonmoney income and outlay,” page 92 for money income receipts (\$2,409 for urban) and personal tax payments (\$37 for urban).

Note that the 1941 urban data from bulletin no. 822 are slightly different than the numbers in “Income and spending and saving of city families in wartime,” bulletin no. 724 (U.S. Government Printing Office, 1942), table 8, page 9.

1941 data for the subset of kitchen, cleaning, and laundry equipment are from “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 9, “Household furnishings and equipment,” page 79, separate column for type of community = urban.

1941 furnishings equipment data are from “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 9, page 79.

1941 vehicle purchase data are from “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 11, page 86, column for urban. Purchase price is net amount after trade-in.

1944 urban data are from “Expenditures and savings of city families in 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946, table 1, “Average money income, expenditures, and savings of families and single persons in cities, by income class, 1944,” page 2. The weighted dollars and shares were calculated by Steven Henderson from the percentages in each income class. Income is after-tax income.

1944 urban income data are after taxes. See footnote 1 of table 1, “Average money income, expenditures and savings of city families and single persons in cities, by income class, 1944,” “Expenditures and savings of city families in 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946, page 2.

1944 furnishings and equipment included kitchen equipment, including stoves (electric, gas, kerosene, gasoline, or coal or wood), refrigerators (electric, gas, ice, or other), kitchen crockery, electric toasters, cleaning equipment including electric and hand vacuum cleaners, carpet sweepers, laundry equipment including washing machines (electric, kerosene, or gasoline), ironing machines, irons (electric or flatirons), washtubs, boards, wringers, boilers, glass, china, silverware, household lines, floor coverings, furniture, miscellaneous including heating stoves, sewing machines, electric fans, and other miscellaneous. Source: “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), detailed table 25, “Household furnishings and equipment, urban families and single consumers, 1941,” pages 130–132.

From page 4 of “Average money income, expenditures and savings of city families and single persons in cities, by income class, 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946: “The wartime disappearance of new automobiles and durable household equipment was reflected in the much smaller share of income devoted to these goods in 1944 than in 1941.”

Notes to table 3

1935–36 urban wage and clerical worker data are from “How American buying habits change,” U.S. Department of Labor (U.S. Government Printing Office, 1959), table 5, page 44, and Eva Jacobs and Stephanie Shipp, “How family spending has changed in the U.S.,” *Monthly Labor Review*, March 1990, table 2, page 22.

1935–36 tobacco spending is calculated as the difference between “recreation, reading, and tobacco” (\$82) from “How American buying habits change,” U.S. Department of Labor (U.S. Government Printing Office, 1959), table 5, page 44, and “entertainment and reading” (\$53) from “How family spending has changed in the U.S.,” *Monthly Labor Review*, March 1990, table 2, page 22.

1935–36 subcategories for entertainment and reading are calculated as ratios from Eva Jacobs and Stephanie Shipp, “How family spending has changed in the U.S.,” *Monthly Labor Review*, March 1990, table 4, “Distribution of entertainment and reading expenditures,” page 26.

The 1935–36 data in table 5 on page 44 of *How American buying habits change* (U.S. Department of Labor, 1956) are from Faith M. Williams and Alice C. Hanson, “Money disbursements of wage and clerical workers, 1934–36, summary volume,” Department of Labor bulletin no. 638, 1941, page 12, but exclude expenditures for “vocation,” “community welfare,” and “gifts and contributions to persons outside economic family.”

1941 urban data are from “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 5, “Major categories of consumption,” page 75, separate column for type of community = urban. The 1941 urban income data are after taxes. See table 16, “Summary of average money and nonmoney income and outlay,” page 92, for money income receipts (\$2,409 for urban) and personal tax payments (\$37 for urban). Note that the 1941 urban data from bulletin no. 822 are slightly different than the numbers in “Income and spending and saving of city families in wartime,” bulletin no. 724 (U.S. Government Printing Office, 1942), table 8, page 9.

- 1941 data for the following are from “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945).
- Data for the subset of kitchen, cleaning and, laundry equipment are from table 9, “Household furnishings and equipment,” page 79, separate column for type of community = urban.
- Data for furnishings equipment are from table 9, page 79.
- Data for vehicle purchases are from table 11, page 86, column for urban. Purchase price is net amount after trade-in.

1944 urban data are from “Expenditures and savings of city families in 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946, table 1, “Average money income, expenditures, and savings of families and single persons in cities, by income class, 1944,” page 2. The weighted dollars and shares were calculated by Steven Henderson from the percentage in each income class. Income is after-tax income.

1944 urban income data are after taxes. See footnote 1 of table 1, “Average money income, expenditures and savings of city families and single persons, 1944,” in “Expenditures and savings of city families in 1944,” *Monthly Labor Review*, January 1946, serial no. R. 1818, page 2.

1944 furnishings and equipment included kitchen equipment including stoves (electric, gas, kerosene, gasoline, or coal or wood), refrigerators (electric, gas, ice, or other), kitchen crockery, electric toasters, cleaning equipment including electric and hand vacuum cleaners, carpet sweepers, laundry equipment including washing machines (electric, kerosene, or gasoline), ironing machines, irons (electric or flatirons), washtubs, boards, wringers, boilers, glass, china, silverware, household lines, floor coverings, furniture, miscellaneous including heating stoves, sewing machines, electric fans, and other miscellaneous. The source is “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics), detailed table 25, “Household furnishings and equipment, urban families and single consumers, 1941,” pages 130–132.

From page 4 of “Average money income, expenditures, and savings of city families and single persons in cities, by income class, 1944,” in “Expenditures and savings of city families in 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946: “The wartime disappearance of new automobiles and durable household equipment was reflected in the much smaller share of income devoted to these goods in 1944 than in 1941.”

The data for 1950 are from *Study of consumer expenditures, incomes and savings, statistical tables, urban U.S. 1950, summary volume XVIII* (University of Pennsylvania, 1957). The numbers are different than those used in *How American buying habits change*, U.S. Department of Labor (U.S. Government Printing Office, 1959), table 8, pages 50–51. The 1950 results cited in *How American buying habits change* was for all urban families of “two or more persons,” not for “all families combined,” which included single households. Income was after-tax only.

1950 data for the following come from *Study of consumer expenditures, incomes and savings, statistical tables, urban U.S. 1950, summary volume XVIII* (University of Pennsylvania, 1957).

The data are for “current consumption” and do not include pensions, personal insurance, or charitable contributions to others. See the definition of “current consumption expenditures” on page xxix.

- The summary numbers are from table 1-2, page 3.
- Income data are “money income after taxes” for all families combined, from table 1-1, page 2.
- House furnishings and equipment data are from table 1-5, page 6.
- Detailed housing and household operations data are from table 1-4, page 5.
- Detailed recreation, reading, and education data are from table 1-9, page 10.
- Detailed transportation data are from table 1-10, page 11.

2013 data are from an unpublished detailed table of consumer expenditures for all consumer units for urban expenditures, table 1702. Income is the new estimated after-tax income using TaxSim instead of reported state and federal income tax payments. Expenditures were adjusted to equal consumption by removing purchase of gifts. Vehicle purchases include leases.

2013 data for “fuel, light, and refrigeration” are the sum of natural gas, electricity, and “fuel oil and other utilities.”

2013 data for “kitchen, cleaning, and laundry equipment” are the sum of major appliances and small appliances minus gifts of major appliances and small kitchen appliances.

2013 data for “other miscellaneous” were adjusted to include miscellaneous expenditures (\$653.24) but exclude cash contributions (\$1,837.57) and personal insurance and pensions (\$5,646.33), which were not included in the 1935–1950 miscellaneous category.

Amounts exclude cash contributions and personal insurance and pensions because these were not included in the wartime categories of consumption and money expense. See the definition of “other money expense,” footnote 4 of table 5, page 77, “Family spending and saving in wartime,” bulletin no. 822.

Notes to table 4

1935–36 urban wage and clerical worker data are from the *How American buying habits change*, U.S. Department of Labor, 1959, table 5, page 44, and Eva Jacobs and Stephanie Shipp, “How family spending has changed in the U.S.,” *Monthly Labor Review*, March 1990, table 2, page 22.

1935–36 subcategories for entertainment and reading are calculated as ratios from table 4, “Distribution of entertainment and reading expenditures,” from Eva Jacobs and Stephanie Shipp, “How family spending has changed in the U.S.,” *Monthly Labor Review*, March 1990, table 4, page 26.

The 1935–36 data in table 5 on page 44 of *How American buying habits change*, U.S. Department of Labor, 1959, are taken from *Money disbursements of wage and clerical workers 1934–36 summary volume*, Department of Labor bulletin no. 638, 1941, page 12, but exclude expenditures for “vocation,” “community welfare,” and “gifts and contributions to persons outside economic family.”

1941 urban income data are after taxes. See “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 16, page 92, “Summary of average money and nonmoney income and outlay,” for money income receipts (\$2,409 for urban) and personal tax payments (\$37 for urban).

Note that the 1941 urban data from bulletin no. 822 are slightly different than the numbers in “Income and spending and saving of city families in wartime,” bulletin no. 724, U.S. Government Printing Office, 1942, table 8, page 9.

1941 vehicle purchase data are from “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), table 11, page 86, column for urban. Purchase price is net amount after trade-in.

1944 urban data are from “Expenditures and savings of city families in 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946, table 1, “Average money income, expenditures, and savings of families and single persons in cities, by income class, 1944,” page 2. The weighted dollars and shares were calculated by Steven Henderson from the percentages in each income class. Income is after-tax income.

1944 urban income data are after taxes. See footnote 1 of table 1, “Average money income, expenditures, and savings of city families and single persons in cities, by income class, 1944,” in “Expenditures and savings of city families in 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946, page 2.

1944 furnishings and equipment included kitchen equipment including stoves (electric, gas, kerosene, gasoline, or coal or wood), refrigerators (electric, gas, ice, or other), kitchen crockery, electric toasters, cleaning equipment including electric and hand vacuum cleaners, carpet sweepers, laundry equipment including washing machines (electric, kerosene, or gasoline), ironing machines, irons (electric or flatirons), washtubs, boards, wringers, boilers, glass, china, silverware, household lines, floor coverings, furniture, miscellaneous including heating stoves, sewing machines, electric fans, and other miscellaneous. The source is “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), detailed table 25, “Household furnishings and equipment, urban families and single consumers, 1941,” pages 130–132.

From page 4 of “Average money income, expenditures, and savings of city families and single persons in cities, by income class, 1944,” in “Expenditures and savings of city families in 1944,” serial no. R. 1818, *Monthly Labor Review*, January 1946: “The wartime disappearance of new automobiles and durable household equipment was reflected in the much smaller share of income devoted to these goods in 1944 than in 1941.”

Note that the data for 1950 are from *Study of consumer expenditures, incomes and savings, statistical tables, urban U.S. 1950, summary volume XVIII* (University of Pennsylvania, 1957). The numbers are different than in those used in *How American buying habits change*, U.S. Department of Labor, U.S. Government Printing Office, 1959, table 8, pages 50–51. The 1950 results cited in *How American buying habits change* was for all urban families of “two or more persons,” not for “all families combined,” which included single households. Income was after tax only.

The 1950 data for the following come from *Study of consumer expenditures, incomes and savings, statistical tables, urban U.S. 1950, summary volume XVIII* (University of Pennsylvania, 1957):

The data are for “current consumption” and do not include pensions, personal insurance, or charitable contributions to others. See the definition of “current consumption expenditures on page xxix.

- The summary numbers are from table 1-2, page 3.
- Income data are “money income after taxes” for all families combined, from table 1-1, page 2.
- House furnishings and equipment data are from table 1-5, page 6.

- Detailed housing and household operations data are from table 1-4, page 5.
- Detailed recreation, reading, and education data are from table 1-9, page 10.
- Detailed transportation data are from table 1-10, page 11.

2013 data are from an unpublished consumer expenditure detailed table for all consumer units for urban expenditures, table 1702. Income is the new estimated after-tax income using TaxSim instead of reported state and federal income tax payments. Expenditures were adjusted to equal consumption by removing purchase of gifts. Vehicle purchases include leases.

2013 data for “fuel, light, and refrigeration” are the sum of natural gas, electricity, and “fuel oil and other utilities.”

2013 data for “kitchen, cleaning, and laundry equipment” are the sum of major appliances and small appliances minus gifts of major appliances and small kitchen appliances.

2013 data for “other miscellaneous” were adjusted to include miscellaneous expenditures (\$653.24) but exclude cash contributions (\$1,837.57) and personal insurance and pensions (\$5,646.33), which were not included in the 1935–1950 miscellaneous category.

Amounts exclude cash contributions and personal insurance and pensions, as these were not included in the wartime categories of consumption and money expense. See the definition of “other money expense,” footnote 4 of table 5, page 77, “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945).

This table excludes cash contributions and personal insurance and pensions, as these were not included in the wartime categories of consumption and money expense. See the definition of “other money expense,” footnote 4 of table 5, page 77, “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945).

Notes

¹ More information on the Bureau of Human Nutrition and Home Economics, 1943–53, is in the National Archives at <http://www.archives.gov/research/guide-fed-records/groups/176.html>.

² As part of an interesting historical discussion on how the Consumer Price Index (CPI) got its current name, see Joseph P. Goldberg and William T. Moyer, *The first hundred years of the Bureau of Labor Statistics*, 1985, p. 151, which mentions both the 1941–42 and the subsequent 1944 wartime consumer expenditure studies, but does not include information about their results. Even *How American buying habits change*, the 1956 book by the Department of Labor, skips the 1940s wartime surveys in its discussion of spending trends in its summary on pp. 34–35 and throughout, except for chapter V on spending on food. Only the results for food purchases from the 1941–42 surveys are included. See table 11, p. 113. The two wartime surveys are mentioned in one paragraph on p. 221, but the results are not included.

³ “Family spending and saving in wartime,” bulletin no. 822 (U.S. Bureau of Labor Statistics, 1945), p. v., http://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/hist/bls_1945_bul_822.pdf.

⁴ Ibid., footnote 14 on p. 19.

⁵ Ibid., pp. 15 and 16.

⁶ Ibid., p. 9.

⁷ Ibid., p. 42.

⁸ For information on the transformation of the U.S. auto industry and vehicle sales in 1942, see <http://teachinghistory.org/history-content/ask-a-historian/24088>.

⁹ For information on the Office of Price Administration, see <http://www.archives.gov/research/guide-fed-records/groups/188.html>.

¹⁰ For more information on the timing of rationing in the United States and the ration stamps during the war, see http://www.ameshistory.org/exhibits/ration_items.htm.

¹¹ The survey form containing the detailed questions is printed in “Family spending and saving in wartime,” appendix B, starting on page 203.

¹² “Income and spending and saving of city families in wartime,” 1942, bulletin no. 724, p. 2, reprinted from the *Monthly Labor Review*, September 1942.

¹³ “Expenditures and savings of city families in 1944,” *Monthly Labor Review*, January 1946, also reprinted as serial no. R. 1818, fn. 2, p. 1.

¹⁴ “Expenditures and savings of city families in 1944,” p. 3.

¹⁵ *Ibid.*, p. 4.

¹⁶ “Income and spending and saving,” pp. 17–18.

¹⁷ “Methodology of the survey of consumer expenditures,” *Study of consumer incomes and savings*, 1959, appendix B, pp. 226–233.

¹⁸ “Study of consumer expenditures, incomes and savings,” *Proceedings of The Conference on Consumption and Saving*, vol. I, new footnote, Irwin Friend and Robert Jones, eds. (Wharton School of Finance and Commerce, University of Pennsylvania, 1960), pp. 311–358.

¹⁹ “Consumer expenditures and income, urban United States, 1960–61, report 237-38 (U.S. Bureau of Labor Statistics, April 1964), pp. 309–310, contained in *Survey of consumer expenditures, 1960–61, vol. 11, United States, total and urban*. Page 1 noted, “Nationwide data on annual family income and expenditure were last published for the year 1941 from the results of a survey of family spending and saving in wartime—a BLS–USDA joint project. The findings of the present survey are in striking contrast to those of the earlier study which was conducted shortly after America’s entry into World War II when the Nation had not fully recovered from the economic depression of the previous decade. In 1941, money income after taxes averaged \$1,948; current living expenditures were \$1,666; while personal taxes were negligible—averaging \$26 per family.”

²⁰ “Consumer Expenditure Survey: integrated diary and interview survey data, 1972–73,” bulletin no. 1992 (U.S. Bureau of Labor Statistics, 1978), “Historical background,” p. 1.

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